

Serial No.: Unassigned

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**REMARKS**

Claims 1-10 are currently pending in the application. By this amendment, claims 1-8 are amended to delete multiple dependencies and to comport with U.S practice. Claims 9 and 10 are added for consideration. The specification is also amended to better comport with U.S. patent practice. A substitute specification and marked up copy of the specification is provided. The amendments are not made to overcome any prior art references. No new matter is added. Applicants request examination on the merits. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 23-1951.

Respectfully submitted,



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**Building Board****BUILDING BOARD****DESCRIPTION****Field of the Invention**

The invention relates to a building board for use as a ceiling or wall element in house building.

**Background Description**

Intermediate ceilings are employed in houses as stacked board ceilings, as boarded floors which are laid and fastened onto exposed and unexposed joists, and as concrete solid ceilings. These ceilings have to be prepared on the spot, so they take a correspondingly long time to make. In prefabricated house building, prefabricated stacked board elements are used.

Unless they are brick-built or cast from concrete, walls are made in post-and-beam construction, i.e. a trussing is erected, which is lined with timber-based material or plaster boards.

## **SUMMARY OF THE INVENTION**

The object of the invention is to provide a building board for use as a ceiling or wall element in house building, which can be used as a prefabricated element, has good heat-insulating and sound-insulating properties and is cheap to produce.

To achieve the object, the building board is distinguished by a plurality of OSBs which are disposed side by side and are bonded together in multiple layers.

The connection of a plurality of boards to form a number of mutually offset layers creates a highly stable building board, which is nevertheless light. OSB (orientated strand board) has good mechanical properties.

In order to increase the stability of the building board, the layers of a plurality of boards are preferably additionally connected by mechanical connecting means (nails, screws, clamps). Manufacture is simplified if, between the individual layers, nail plates are employed for additional fastening.

In order to increase the sound-insulation and heat-insulation, a plastics mat can be provided between the layers.

The impact sound properties can be improved if interspaces are provided between the boards of a layer. These interspaces can also be filled with an insulating material.

The building board has a length of 2 to 20 m, especially 2 to 10 m or 4 to 6 m. The thickness measures 50 to 900 mm, especially 100 to 400 mm or 100 to 250 mm.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

An illustrative embodiment of the invention shall be described below with the aid of the drawing, which shows a perspective representation of a building board.

**Figure 1 is a schematic diagram of the building board of the invention.**

### **DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION**

The building board consists of a plurality of OSBs 1, 2, 3; 1a, 2a, 3a; 1b, 2b, 3b, which are bonded together one on top of the other to form multiple layers. As the adhesive, amino resins, especially melamine-reinforced urea resins, MUF, phenolic and resorcinol resins, or polyurethane-based and cyanate-based adhesives, as well as vinyl acetate-based, especially PVAc-based adhesives, may be used. The surface of the OSBs can be ground or non-ground. The individual boards 1, 2, 3,... can have a thickness between 8 and 60 mm. Between individual boards 1a, 2a, 3a,... of a layer, interspaces 4 might be provided. These interspaces 4 can be filled with an insulating material 5. The interspaces 4 improve

the sound-insulating properties, which can be improved still further if the interspaces 4 are filled with insulating material 5. The interspaces 4 are about 20 mm wide. The heat-insulating and sound-insulating properties can be further enhanced if plastics mats 6 are provided between the individual layers.

In order to support the bonding of the individual layers, nail plates 7 can be provided. In addition, the individual layers can also be nailed, screwed or clamped together.

With the building board, spans of 4 to 10 m, preferably between 4 and 6 m, can be achieved in ceilings. In the case of walls, a span of 2 to 20 m and a width of 2 to 10 m can be achieved. The thickness of the building board for use as a ceiling element measures between 5 and 90 cm, preferably between 10 and 40 cm. The thickness of a wall element measures between 5 and 30 cm, preferably between 10 and 25 cm.

## Patent claims

1. A building board for use as a ceiling or wall element in house building, characterized by a plurality of OSBs (1, 2, 3; 1a, 2a, 3a; 1b, 2b, 3b) which are disposed by side and are bonded together in multiple layers.
2. The building board as claimed in claim 1, characterized in that the layers of a plurality of boards (1, 2, 3; 1a, 2a, 3a; 1b, 2b, 3b) are additionally connected to one another by mechanical connecting means.
3. The building board as claimed in claim 2, characterized in that at least one nail plate (7) is disposed between respectively two layers lying one on top of the other.
4. The building board as claimed in claim 1, characterized in that at least one plastics mat (6) is disposed between two layers lying one on top of the other.
5. The building board as claimed in claim 1, characterized in that interspaces (4) are provided between the boards (1, 2, 3; 1a, 2a, 3a; 1b, 2b, 3b) of a layer.
6. The building board as claimed in claim 5, characterized in that the interspaces (4) are filled with an insulating material (5).

7. The building board as claimed in one or more of the above claims, characterized by a length of 2 - 20 m, especially 2 - 10 at or 4 - 6 m.

8. The building board as claimed in one or more of the above claims, characterized by a thickness of 50 - 90 mm, especially 100 - 400 mm or 100 - 250 mm.

## **BUILDING BOARD**

### **Abstract**

A building board for use as a ceiling or wall element in house building is characterized by a plurality of OSBs (1, 2, 3; 1a, 2a, 3a; 1b, 2b, 3b)-which are disposed side by side and are bonded together in multiple layers.

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